
Groundwater Sampling to Begin this Spring

Keystone Corridor Groundwater Contamination Site

Indianapolis, Indiana

April 2016

For more information

See back page for contact information of EPA and other federal, state and local officials who are working on this site.

Information repository

A complete file of documents regarding the site is at:
Indianapolis Public Library
4180 N. College Ave.

Community involvement plan

EPA expects to share the Community Involvement Plan with local residents and other interested parties this spring.

Website

www.epa.gov/superfund/keystone-corridor-groundwater/

Indiana Department of Environmental Management Federal Programs Section

www.in.gov/idem/landquality/2345.htm

Marion County Public Health Department

www.marionhealth.org/

Agency for Toxic Substances and Diseases Registry

www.atsdr.cdc.gov/toxfaqs/tf.asp?id=264&tid=48

The U.S. Environmental Protection Agency is getting ready to begin fieldwork this spring at the Keystone Corridor Groundwater Contamination site. The main purpose of the first phase of this investigation will be to determine the location and source or sources of contaminated groundwater for future cleanup efforts. “Groundwater” is an environmental term for underground sources of fresh water.

The initial investigation will include drilling at 38 locations to sample groundwater at different depths. A track-mounted sonic drill rig, which is the size of a tow truck, will complete the work, supported by a small excavator. Samples will be collected from two to three spots at each location. Depths will range from the water table to around 90 feet below ground. Soil samples will also be collected while drilling from most of these locations.

History and background

The site consists of the Fall Creek well field and potential sources of the groundwater contamination. The underground water has been affected by chemicals typically used in a variety of industries such as dry cleaners and metalwork shops. These chemicals include volatile organic compounds, or VOCs. The VOCs have names such as tetrachlorethene, or PCE; trichloroethene, or TCE; cis-1,2-dichloroethene, or cis-1,2-DCE; and vinyl chloride. All are known to be harmful to people if exposed at high enough levels.

Site investigations have identified contaminants in the wellhead protection area of the Fall Creek well field that serves Indianapolis-area customers. The local water company is Citizens Water, and it operates nine active municipal wells in the Fall Creek well field. These wells are among the oldest in the well system dating back to the 1920s and contribute up to 44 percent of water intake from the well field. VOCs have historically been detected in five of the wells. In one of the five wells, vinyl chloride was detected at amounts above the EPA’s Safe Drinking Water Act Maximum Contaminant Level, or MCL. However, that well has been removed from service. Citizens Water treats all water and continuously monitors and blends the water before distributing it to the public.

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Cleanup progress

Since 2012, EPA responders have been working at a nearby former industrial dry cleaning facility called Tuchman Cleaners and have an ongoing cleanup action there under the Superfund Emergency Response Program. Around 30 million gallons of water were pumped and treated from the contaminated aquifer from December 1995 to December 2002 at Tuchman Cleaners. EPA installed vapor mitigation systems at residential properties where the gases were above safe levels. Analytical results from tested properties show indoor air pollution significantly reduced.

In December 2013, EPA added the Keystone Corridor site to the National Priorities List, or NPL. The NPL is a roster of the nation's hazardous waste sites eligible for cleanup under the EPA Superfund program.

Next steps

The results of the sampling will be used to determine the locations for permanent monitoring wells, each location consisting of paired wells in the groundwater — one shallow (approximately 25 feet) and one deep (approximately 75 feet). These wells will be sampled periodically to monitor the contamination in the groundwater.

EPA also plans to collect soil gas samples from areas in the groundwater plume that have contaminants at the highest concentrations. These samples will help determine potential vapor intrusion concerns. If results indicate a possible problem, EPA will conduct additional sampling. Vapor intrusion can occur when underground pollutants give off gases that rise through the soil and seep into structures through holes or cracks in foundations or crawl spaces. The vapors can then potentially cause exposure to harmful indoor air pollution.

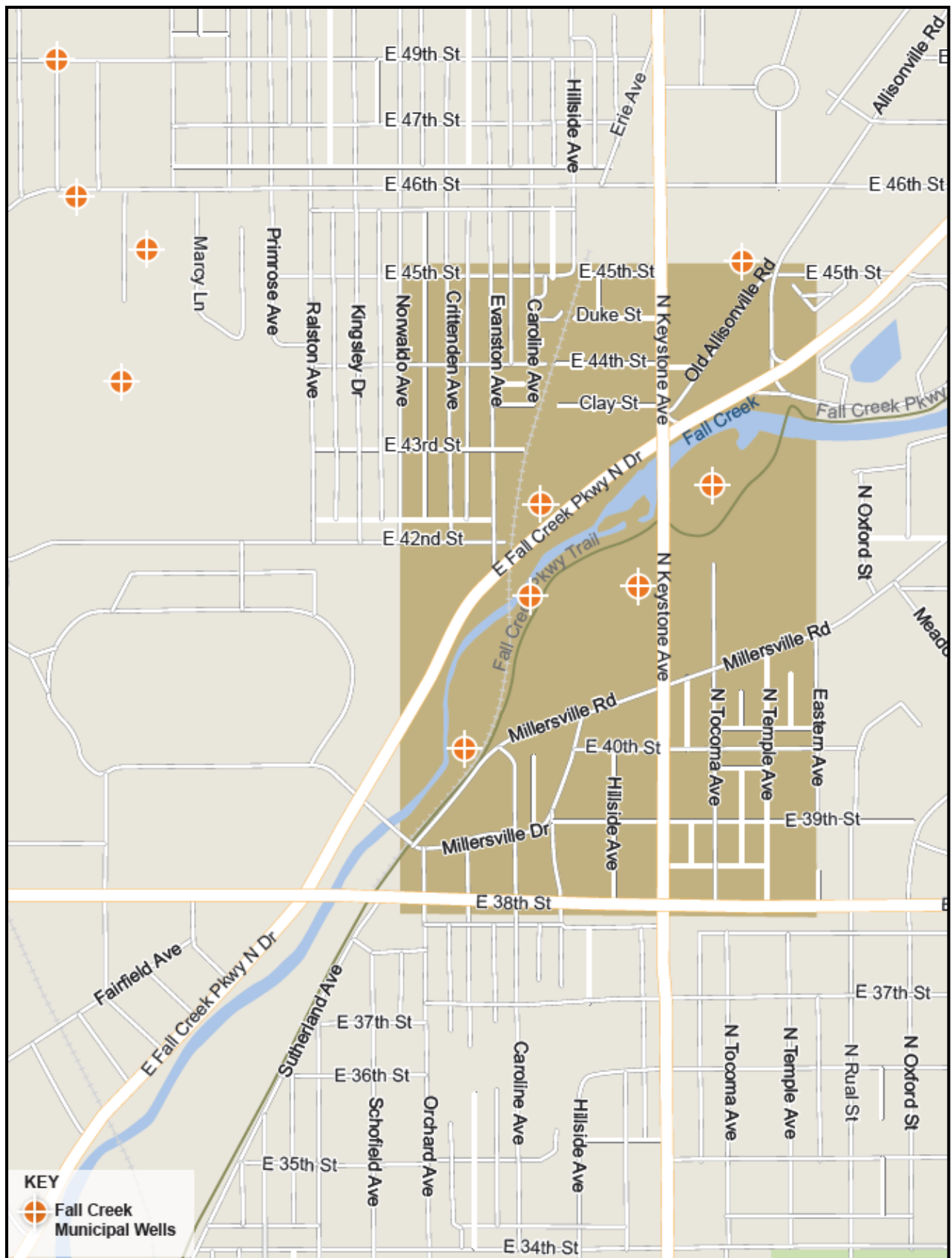
About tetrachloroethylene (PCE)

PCE is a chemical used for dry cleaning of fabrics and for metal degreasing in metal workshops. It is also used to make other chemicals and is used in some consumer products.

PCE can move easily through air, water and soil and may harm people. EPA has determined that exposure to PCE is associated with cancer in humans through swallowing, breathing and skin contact. Here are some other issues with PCE:

- At high concentrations in air, particularly in closed, poorly ventilated areas, exposure to PCE can cause dizziness, headache, sleepiness, confusion, nausea, difficulty in speaking and walking, unconsciousness and death in very extreme situations.
- At low levels in air or drinking water (within the safe drinking water standards), risk of adverse health effects is minimal.

For more information about possible health effects from PCE, visit the Agency for Toxic Substances and Diseases Registry website at www.atsdr.cdc.gov/toxfaqs/tf.asp?id=264&tid=48.



Map of Keystone Corridor Groundwater Contamination site. The shaded area shows the approximate boundary of the site.

Keystone Corridor Groundwater Contamination Site

For more information

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www.epa.gov/superfund/keystone-corridor-groundwater

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